

WHAT IS CLAIMED IS:

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1. A light amount control device comprising:
- light source driving means for driving a light source to emit a light at a first optical amount level value and a second optical amount level value greater
- 10 than the first optical amount level value;
- anterior reflected light signal level detecting means for irradiating the light emitted from said light source onto a recording medium and detecting a signal level value of the reflected light reflected by
- 15 said recording medium before recording information on said recording medium;
- reference level value retaining means for retaining the detected signal level value as a reference level value;
- 20 posterior reflected light signal level detecting means for irradiating the light emitted from said light source onto said recording medium and detecting a signal level value of the reflected light reflected by said recording medium after starting
- 25 information recording on said recording medium;

5           drive current adjusting means for adjusting a  
drive current which drives said light source to emit the  
light based on a result of the comparison of said  
comparing means,

first reflected light signal level value  
detecting means for detecting the second optical amount  
15 level value of the reflected light reflected by said  
recording medium;

detection place selecting means for selecting one of outputs of the first reflected light signal level value detecting means and the second reflected light signal level value detecting means in accordance with an instruction for selection.

2. The light amount control device as claimed in claim 1, wherein the instruction for selection is determined based on a digital modulation rate of said light source.

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3. The light amount control device as claimed  
10 in claim 2, wherein the instruction for selection is determined so as to cause said detection place selecting means to select the output of said first reflected light signal level value detecting means when the digital modulation rate of said light source is low, and to  
15 select the output of said second reflected light signal level value detecting means when the digital modulation rate of said light source is high.

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4. The light amount control device as claimed in claim 1, wherein the instruction for selection is determined based on a kind of said recording medium.

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light source driving means for driving a light  
emit a light at a first optical amount level  
second optical amount level value greater than  
optical amount level value and a third optical  
el value greater than the second optical  
el value;

reference level value retaining means for  
15 retaining the detected signal level value as a reference  
level value;

comparing means for comparing the detected  
signal level value with the reference level value  
25 retained by said reference level value retaining means;

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comparing means,

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wherein said drive current adjusting means includes means for adjusting the drive current supplied

to said light source so as to cause said light source to  
emit the light at the reference level value in  
accordance with a result of comparison of said comparing  
means when said light source emits the light at the  
5 second optical amount level value, and for adjusting the  
drive current supplied to said light source so as to  
cause said light source to emit the light at the third  
reference level value in accordance with an efficiency  
value obtained by a relationship between a value  
10 corresponding to the second optical level value and a  
value corresponding to the drive current.

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6. The light amount control device as claimed  
in claim 5, wherein the instruction for selection is  
determined based on a digital modulation rate of said  
light source..

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7. The light amount control device as claimed  
25 in claim 6, wherein the instruction for selection is

determined so as to cause said detection place selecting means to select the output of said first reflected light signal level value detecting means when the digital modulation rate of said light source is low, and to  
5 select the output of said second reflected light signal level value detecting means when the digital modulation rate of said light source is high.

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8. The light amount control device as claimed in claim 5, wherein the instruction for selection is determined based on a kind of said recording medium.

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9. An information recording apparatus for  
20 recording information on a recording medium by irradiating a light from a light source, said information recording apparatus comprising:

light source driving means for driving said light source to emit a light at a first optical amount  
25 level value and a second optical amount level value

anterior reflected light signal level  
detecting means for irradiating the light emitted from  
said light source onto said recording medium and  
5 detecting a signal level value of the reflected light  
reflected by said recording medium before recording  
information on said recording medium;

posterior reflected light signal level  
detecting means for irradiating the light emitted from  
said light source onto said recording medium and  
detecting a signal level value of the reflected light  
15 reflected by said recording medium after starting  
recording information on said recording medium;

drive current adjusting means for adjusting a drive current which drives said light source to emit the light based on a result of the comparison of said comparing means,

25 wherein each of said anterior reflected light



signal level value detecting means and said posterior reflected light signal level value detecting means includes:

first reflected light signal level value  
5 detecting means for detecting the second optical amount level value of the reflected light reflected by said recording medium;

second reflected light signal level value  
detecting means for detecting an average value of the  
10 signal level value of the light emitted by said light source; and

detection place selecting means for selecting  
one of outputs of the first reflected light signal level  
value detecting means and the second reflected light  
15 signal level value detecting means in accordance with an instruction for selection.

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10. The information recording apparatus as claimed in claim 9, wherein the instruction for selection is determined based on a digital modulation rate of said light source.

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5 light source driving means for driving said  
light source to emit a light at a first optical amount  
level value, a second optical amount level value greater  
than the first optical amount level value and a third  
optical amount level value greater than the second  
10 optical amount level value;

anterior reflected light signal level  
detecting means for irradiating the light emitted from  
said light source onto said recording medium and  
detecting a signal level value of the reflected light  
reflected by said recording medium before recording  
information on said recording medium;

reference level value retaining means for retaining the detected signal level value as a reference level value;

20                   posterior reflected light signal level  
detecting means for irradiating the light emitted from  
said light source onto said recording medium and  
detecting a signal level value of the reflected light  
reflected by said recording medium after starting  
25 recording information on said recording medium;

comparing means for comparing the detected signal level value with the reference level value retained by said reference level value retaining means; and

5 drive current adjusting means for adjusting a drive current which drives said light source to emit the light based on a result of the comparison of said comparing means,

wherein each of said anterior reflected light  
10 signal level value detecting means and said posterior reflected light signal level value detecting means includes:

first reflected light signal level value detecting means for detecting one of the second optical  
15 amount level value and the third optical amount level value of the reflected light reflected by said recording medium;

second reflected light signal level value detecting means for detecting an average value of the  
20 signal level value of the light emitted by said light source; and

detection place selecting means for selecting one of outputs of the first reflected light signal level value detecting means and the second reflected light  
25 signal level value detecting means in accordance with an

instruction for selection, and

wherein said drive current adjusting means includes means for adjusting the drive current supplied to said light source so as to cause said light source to  
5 emit the light at the reference level value in accordance with a result of comparison of said comparing means when said light source emits the light at the second optical amount level value, and for adjusting the drive current supplied to said light source so as to  
10 cause said light source to emit the light at the third optical amount level value in accordance with an efficiency value obtained by a relationship between a value corresponding to the second optical level value and a value corresponding to the drive current.

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15. The information recording apparatus as  
20 claimed in claim 14, wherein the instruction for selection is determined based on a digital modulation rate of said light source.

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16. The information recording apparatus as  
claimed in claim 15, wherein the instruction for  
selection is determined so as to cause said detection  
place selecting means to select the output of said first  
5 reflected light signal level value detecting means when  
the digital modulation rate of said light source is low,  
and to select the output of said second reflected light  
signal level value detecting means when the digital  
modulation rate of said light source is high.

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17. The information recording apparatus as  
15 claimed in claim 14, wherein the instruction for  
selection is determined based on a kind of said  
recording medium.

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18. The information recording apparatus as  
claimed in claim 14, wherein said information recording  
apparatus is configured and arranged to be incorporated  
25 into a computer.